

Non-Interference Compliance

Regarding Facility id 149924

Channel 272

Description of Exhibit 12 Contents

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Pages 4 through 6 include a plot and a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 7 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 8 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 9 of this exhibit is a high resolution aerial photo of the vicinity surrounding the proposed translator's tower site provided by the U.S. Geological Survey's National Aerial Photography Program. It has been included to provide clarification of the nature of the buildings in the vicinity.

Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

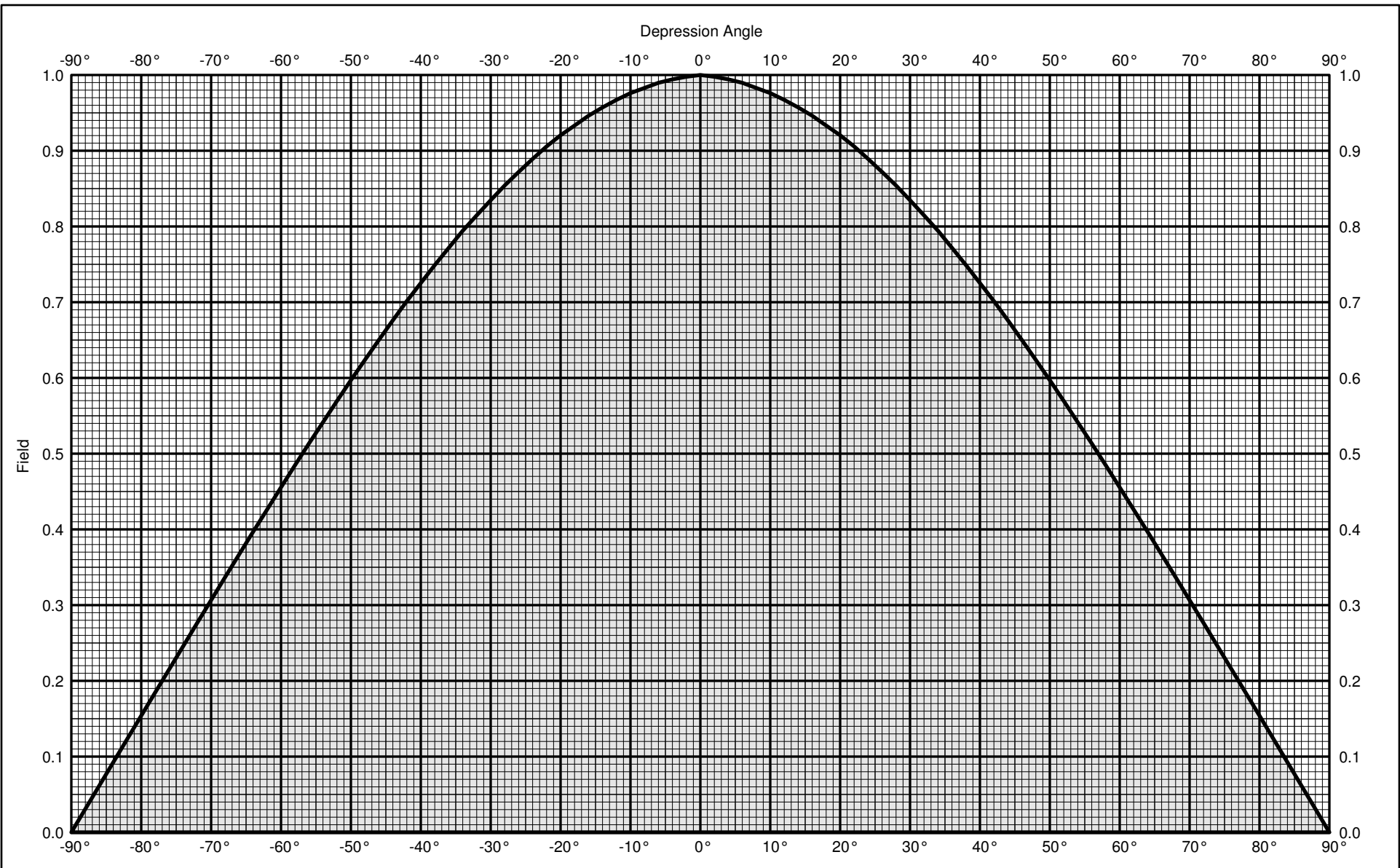
Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1124288	BPH20060518ABH	KINK	93.9	93.3
1125578	BLH20060518AAK	KINK	92.8	92.2
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				92.2

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **92.2 dBμ**, this makes the proposed translator's worst-case interfering contour **132.2 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **17.1 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 8 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **22 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference. Hence, in accordance with 47 C.F.R. § 74.1204(d) and the clarification provided by the FCC in the decision *Re: Living Way Ministries* (FCC 02-244), a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Antenna Manufacturer:	SCA
Antenna Model:	GP-FM
CORAGL:	30 m
Maximum ERP:	0.099 kW
Interfering Contour:	132.2 dBμ
Max Int. Contour Distance:	17.1 m
Min Ground Clearance:	22 m

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.992	97.4	17.0	16.9	28.5
10	.976	94.3	16.7	16.5	27.1
15	.952	89.7	16.3	15.8	25.8
20	.920	83.8	15.8	14.8	24.6
25	.881	76.8	15.1	13.7	23.6
30	.835	69.0	14.3	12.4	22.8
35	.783	60.7	13.4	11.0	22.3
40	.725	52.0	12.4	9.5	22.0
45	.663	43.5	11.4	8.0	22.0
50	.597	35.3	10.2	6.6	22.2
55	.527	27.5	9.0	5.2	22.6
60	.456	20.6	7.8	3.9	23.2
65	.382	14.4	6.5	2.8	24.1
70	.307	9.3	5.3	1.8	25.1
75	.231	5.3	4.0	1.0	26.2
80	.154	2.3	2.6	0.5	27.4
85	.077	0.6	1.3	0.1	28.7
90	.010	0.0	0.2	0.0	29.8
Minimum Clearance above TGL:					22 m



GP-FM Groundplane

Vertical radiation pattern

FM

0.0 dBd (2.15 dBi)

Vertical polarization



KATHREIN
SCALA DIVISION
 Post Office Box 4580 Phone:(541)779-6500
 Medford, OR 97501 (USA) Fax:(541)779-3991
<http://www.kathrein-scala.com>



GP-FM Groundplane

FM

0.0 dBd (2.15 dBi)

Vertical polarization

Vertical radiation pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.010	-40.00	-40.00	0.00	-45	0.663	-3.57	-3.57	0.44
-89	0.015	-36.24	-36.24	0.00	-44	0.676	-3.40	-3.40	0.46
-88	0.031	-30.22	-30.22	0.00	-43	0.689	-3.24	-3.24	0.47
-87	0.046	-26.70	-26.70	0.00	-42	0.701	-3.08	-3.08	0.49
-86	0.062	-24.20	-24.20	0.00	-41	0.713	-2.93	-2.93	0.51
-85	0.077	-22.26	-22.26	0.01	-40	0.725	-2.79	-2.79	0.53
-84	0.092	-20.68	-20.68	0.01	-39	0.737	-2.65	-2.65	0.54
-83	0.108	-19.34	-19.34	0.01	-38	0.749	-2.51	-2.51	0.56
-82	0.123	-18.18	-18.18	0.02	-37	0.760	-2.38	-2.38	0.58
-81	0.139	-17.16	-17.16	0.02	-36	0.772	-2.25	-2.25	0.60
-80	0.154	-16.25	-16.25	0.02	-35	0.783	-2.12	-2.12	0.61
-79	0.169	-15.42	-15.42	0.03	-34	0.794	-2.00	-2.00	0.63
-78	0.185	-14.67	-14.67	0.03	-33	0.805	-1.89	-1.89	0.65
-77	0.200	-13.98	-13.98	0.04	-32	0.815	-1.78	-1.78	0.66
-76	0.215	-13.34	-13.34	0.05	-31	0.825	-1.67	-1.67	0.68
-75	0.231	-12.75	-12.75	0.05	-30	0.835	-1.57	-1.57	0.70
-74	0.246	-12.19	-12.19	0.06	-29	0.844	-1.47	-1.47	0.71
-73	0.261	-11.67	-11.67	0.07	-28	0.854	-1.37	-1.37	0.73
-72	0.276	-11.17	-11.17	0.08	-27	0.863	-1.28	-1.28	0.74
-71	0.291	-10.71	-10.71	0.08	-26	0.872	-1.19	-1.19	0.76
-70	0.307	-10.27	-10.27	0.09	-25	0.881	-1.10	-1.10	0.78
-69	0.322	-9.85	-9.85	0.10	-24	0.889	-1.02	-1.02	0.79
-68	0.337	-9.45	-9.45	0.11	-23	0.897	-0.94	-0.94	0.81
-67	0.352	-9.07	-9.07	0.12	-22	0.906	-0.86	-0.86	0.82
-66	0.367	-8.71	-8.71	0.13	-21	0.913	-0.79	-0.79	0.83
-65	0.382	-8.36	-8.36	0.15	-20	0.920	-0.72	-0.72	0.85
-64	0.397	-8.03	-8.03	0.16	-19	0.927	-0.66	-0.66	0.86
-63	0.411	-7.71	-7.71	0.17	-18	0.933	-0.60	-0.60	0.87
-62	0.426	-7.41	-7.41	0.18	-17	0.940	-0.54	-0.54	0.88
-61	0.441	-7.12	-7.12	0.19	-16	0.946	-0.48	-0.48	0.90
-60	0.456	-6.83	-6.83	0.21	-15	0.952	-0.43	-0.43	0.91
-59	0.470	-6.56	-6.56	0.22	-14	0.957	-0.38	-0.38	0.92
-58	0.485	-6.29	-6.29	0.23	-13	0.962	-0.33	-0.33	0.93
-57	0.499	-6.04	-6.04	0.25	-12	0.967	-0.29	-0.29	0.94
-56	0.513	-5.79	-5.79	0.26	-11	0.972	-0.25	-0.25	0.94
-55	0.527	-5.56	-5.56	0.28	-10	0.976	-0.21	-0.21	0.95
-54	0.541	-5.33	-5.33	0.29	-9	0.979	-0.18	-0.18	0.96
-53	0.555	-5.11	-5.11	0.31	-8	0.983	-0.15	-0.15	0.97
-52	0.570	-4.89	-4.89	0.32	-7	0.986	-0.12	-0.12	0.97
-51	0.583	-4.68	-4.68	0.34	-6	0.990	-0.09	-0.09	0.98
-50	0.597	-4.48	-4.48	0.36	-5	0.992	-0.07	-0.07	0.98
-49	0.610	-4.29	-4.29	0.37	-4	0.994	-0.05	-0.05	0.99
-48	0.624	-4.10	-4.10	0.39	-3	0.996	-0.03	-0.03	0.99
-47	0.637	-3.92	-3.92	0.41	-2	0.998	-0.02	-0.02	1.00
-46	0.650	-3.74	-3.74	0.42	-1	0.999	-0.01	-0.01	1.00
					0	1.000	0.00	0.00	1.00



GP-FM Groundplane
FM

0.0 dBd (2.15 dBi)

Vertical polarization

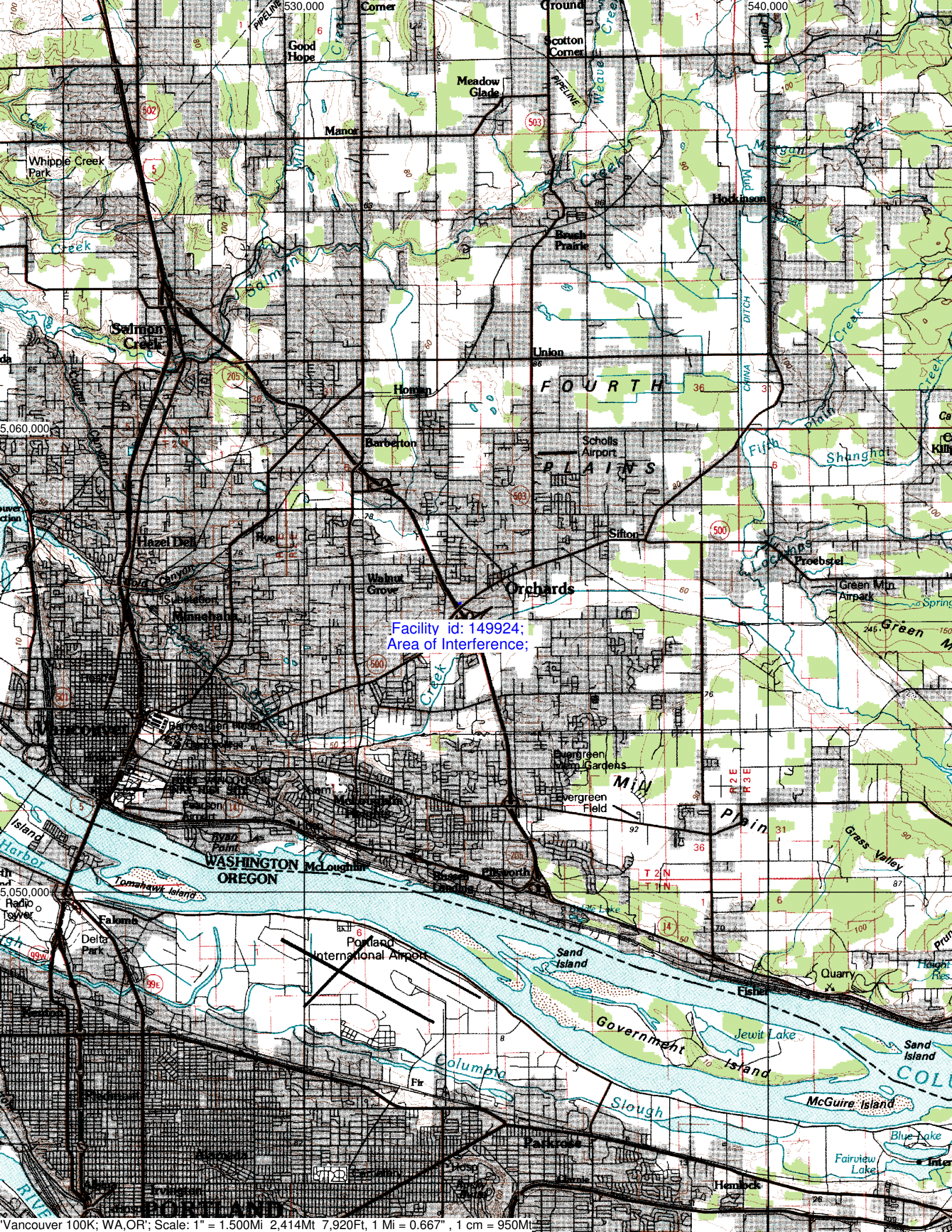
Vertical radiation pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	0.00	1.00	45	0.663	-3.57	-3.57	0.44
1	0.999	-0.01	-0.01	1.00	46	0.650	-3.74	-3.74	0.42
2	0.998	-0.02	-0.02	1.00	47	0.637	-3.92	-3.92	0.41
3	0.996	-0.03	-0.03	0.99	48	0.624	-4.10	-4.10	0.39
4	0.994	-0.05	-0.05	0.99	49	0.610	-4.29	-4.29	0.37
5	0.992	-0.07	-0.07	0.98	50	0.597	-4.48	-4.48	0.36
6	0.990	-0.09	-0.09	0.98	51	0.583	-4.68	-4.68	0.34
7	0.986	-0.12	-0.12	0.97	52	0.570	-4.89	-4.89	0.32
8	0.983	-0.15	-0.15	0.97	53	0.555	-5.11	-5.11	0.31
9	0.979	-0.18	-0.18	0.96	54	0.541	-5.33	-5.33	0.29
10	0.976	-0.21	-0.21	0.95	55	0.527	-5.56	-5.56	0.28
11	0.972	-0.25	-0.25	0.94	56	0.513	-5.79	-5.79	0.26
12	0.967	-0.29	-0.29	0.94	57	0.499	-6.04	-6.04	0.25
13	0.962	-0.33	-0.33	0.93	58	0.485	-6.29	-6.29	0.23
14	0.957	-0.38	-0.38	0.92	59	0.470	-6.56	-6.56	0.22
15	0.952	-0.43	-0.43	0.91	60	0.456	-6.83	-6.83	0.21
16	0.946	-0.48	-0.48	0.90	61	0.441	-7.12	-7.12	0.19
17	0.940	-0.54	-0.54	0.88	62	0.426	-7.41	-7.41	0.18
18	0.933	-0.60	-0.60	0.87	63	0.411	-7.71	-7.71	0.17
19	0.927	-0.66	-0.66	0.86	64	0.397	-8.03	-8.03	0.16
20	0.920	-0.72	-0.72	0.85	65	0.382	-8.36	-8.36	0.15
21	0.913	-0.79	-0.79	0.83	66	0.367	-8.71	-8.71	0.13
22	0.906	-0.86	-0.86	0.82	67	0.352	-9.07	-9.07	0.12
23	0.897	-0.94	-0.94	0.81	68	0.337	-9.45	-9.45	0.11
24	0.889	-1.02	-1.02	0.79	69	0.322	-9.85	-9.85	0.10
25	0.881	-1.10	-1.10	0.78	70	0.307	-10.27	-10.27	0.09
26	0.872	-1.19	-1.19	0.76	71	0.291	-10.71	-10.71	0.08
27	0.863	-1.28	-1.28	0.74	72	0.276	-11.17	-11.17	0.08
28	0.854	-1.37	-1.37	0.73	73	0.261	-11.67	-11.67	0.07
29	0.844	-1.47	-1.47	0.71	74	0.246	-12.19	-12.19	0.06
30	0.835	-1.57	-1.57	0.70	75	0.231	-12.75	-12.75	0.05
31	0.825	-1.67	-1.67	0.68	76	0.215	-13.34	-13.34	0.05
32	0.815	-1.78	-1.78	0.66	77	0.200	-13.98	-13.98	0.04
33	0.805	-1.89	-1.89	0.65	78	0.185	-14.67	-14.67	0.03
34	0.794	-2.00	-2.00	0.63	79	0.169	-15.42	-15.42	0.03
35	0.783	-2.12	-2.12	0.61	80	0.154	-16.25	-16.25	0.02
36	0.772	-2.25	-2.25	0.60	81	0.139	-17.16	-17.16	0.02
37	0.760	-2.38	-2.38	0.58	82	0.123	-18.18	-18.18	0.02
38	0.749	-2.51	-2.51	0.56	83	0.108	-19.34	-19.34	0.01
39	0.737	-2.65	-2.65	0.54	84	0.092	-20.68	-20.68	0.01
40	0.725	-2.79	-2.79	0.53	85	0.077	-22.26	-22.26	0.01
41	0.713	-2.93	-2.93	0.51	86	0.062	-24.20	-24.20	0.00
42	0.701	-3.08	-3.08	0.49	87	0.046	-26.70	-26.70	0.00
43	0.689	-3.24	-3.24	0.47	88	0.031	-30.22	-30.22	0.00
44	0.676	-3.40	-3.40	0.46	89	0.015	-36.24	-36.24	0.00
					90	0.010	-40.00	-40.00	0.00

Adjacent Channel Study **For Station K275AQ, Facility_id: 149924**

Co-channel through third adjacent:

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Overlap
1125578	53068	BLH	20060518AAK	KINK	CBS RADIO STATIONS INC.	C0	PORTLAND	OR	LIC	97	532.8	270	2	20.4	0.5908
1124288	53068	BPH	20060518ABH	KINK	CBS RADIO STATIONS INC.	C	PORTLAND	OR	CP	96	594.1	270	2	20.4	0.5908
1006731	53068	BXLH	20040806AAZ	KINK	INFINITY RADIO INC.	C	PORTLAND	OR	LIC	40	529.4	270	2	20.5	0.5908
1050773	60147	BLFT	20050315AEC	K274AR	EDUCATIONAL MEDIA FOUNDATION	D	GRESHAM	OR	LIC	0.01	540	274	2	20.5	0
605732	93257	BLFT	20020624AAE	K273AI	CALVARY CHAPEL OF TWIN FALLS, INC.	D	ARIEL	WA	LIC	0.006	581	273	1	42.7	0
669384	91973	BLFT	20030703ABN	K273AJ	CALVARY CHAPEL OF TWIN FALLS, INC.	D	ELWOOD	OR	LIC	0.01	1331	273	1	62.8	0
1086877	148080	BLFT	20051019AAB	K275AI	M.S.W. COMMUNICATIONS, L.L.C.	D	OAK GROVE	OR	LIC	0.067	230	275	3	80.7	0
671819	139636	BNPFT	20030828BGD	K274BI	CITICASTERS LICENSES, L.P.	D	FOUR CORNERS	OR	CP	0.25	368	274	2	99.5	0
273685	33946	BLH	19980909KF	KCRX-FM	DOLPHIN RADIO, INC	C3	SEASIDE	OR	LIC	25	258	272	0	110.7	0
282987	12242	BLH	19990318KD	KYYT	COLIN B. MALCOLM	C2	GOLDENDALE	WA	LIC	2.1	943	272	0	129.3	0
1034683	33829	BLH	20050126ABD	KNBQ	CITICASTERS LICENSES, L.P.	C	CENTRALIA	WA	LIC	70	867	275	3	152.5	0



Facility id: 149924;
Area of Interference;

